SPECIFICATION

Please make the following 6 numbered corrections to the Specification:

(1) Page 1, insert after the title:

CROSS-REFERENCE TO RELATED APPLICATION

D1

This national phase application under 35 U.S.C. § 371 of PCT application US00/20099 claims priority of Provisional Application 60/145,286, filed July 23, 1999.

(2) Page 5, line 24, change the paragraph to read:

D2

~~**FIG. 14** is a frontal view~~ **FIGS. 14A, 14B, and 14C** are frontal views of additional aircraft configurations for this invention. ?

(3) Page 6, line 10, change the paragraph to read:

D3

~~**FIG. 25** shows a variety~~ **FIGS. 25A and 25B** show other embodiments of deployable lifting systems. 25A, 25B, and 25C

(4) Page 19, lines 1-9, change the paragraph to read:

D4

~~**FIG. 14** shows some~~**FIGS. 14A** and **14B** show UAV configurations designed to intercept the arresting cable at a near parallel angle. The UAV configuration~~on the top~~ of **FIG. 14A** is designed so the wing would deflect any cables to the centerline latching mechanism that it flies up into or alternatively the landing gear struts would deflect any cables to the centerline latching mechanism that the UAV flies down onto or ~~visa-versa~~vice versa if the vehicle were flown upside down for engagement. The UAV~~at the bottom~~ of **FIG. 14B** is designed to deflect a cable to a centerline latching mechanism with its lower wing or its V tail surfaces. Other configurations are of course possible, for example, the cables

D4 cancel

could be deflected to wingtip latches, dedicated deflecting structures could be used, etc.

(5) Page 23, line 20 to page 25, line 15, amend the paragraphs to read:

FIG. 25A shows a parasail 244 ~~on the left~~ that is fully inflated. Remote control unit 230 contains a winch that can reel in or out lines 232 and 234 which in turn pass back and up to the left and right rim of the parasail canopy. Line 232 passes through a pulley and then passes up around the mouth of the parasail canopy through rings 206 attached to each riser and line 234 passes down around the mouth of the parasail canopy. By reeling in lines 232 and 234, remote control unit 230 can close down the parasail mouth such as shown in ~~the top middle sketch of~~ **FIG. 25B** in order to reduce the lift and drag of the parasail. This technique is very effective and can greatly reduce the load on the parasail and tow lines. This system has the advantage that the ship can now operate over a much wider speed range without worrying about either having too little parasail lift or too much load or drag on the system. Also only one parasail size is required to launch and recover different sized UAVs or carry various size payloads aloft. After a UAV launch the parasail lift and drag can be reduced to make it easier to pull back down. This system also allows inflation of very large parasails on the flight deck in high winds in a safer more controlled manner by starting with the mouth of the parasail 236 mostly closed down but the parasail lifted into the air by smaller parasail 240 pulling on and lifting line 242 which passes through and is attached to the center of the parachute at 246. Also after the parasail has been winched back down onto the flight deck this system

D5

provides one of the best approaches for deflating the parasail in high winds by totally closing off the mouth 236. A small winch in remote control unit 230 can let out line 242 so that parachute 240 will pull back at the center of the parasail 244 at point 246 to further deflate the chute, pull the parasail fabric back in a streamlined manner and keep the parasail material from flapping excessively or getting tangled. With an automated approach the parasail risers and parasail 244 can be retracted all the way onto the winch 6 used to extend and retract the tow line 4. For launching parasail 240 would be deployed in a conventional manner and it would pull the much larger parasail 244 off of the winch 6.

D5 control

Parasail 244 would also be steerable as is known in the art for paratroop parachutes and remote control unit 230 would have small winches that pull left and right control lines in place of having a paratrooper doing it to keep the parasail in the correct rolled attitude to provide lift vertically. This eliminates the need for ballast which would also make it very difficult to roll the parasail 244 onto the winch 6. Without any ballast required only a very small amount of relative wind would be required to keep the parasail aloft between launches or recoveries. If a lighter than air and preferably a hot air balloon were integrated with this system then the ship could go for long periods and operate in absolute zero relative wind conditions without having to reel the system back in. It is also understood that in addition or as an alternative to closing down the mouth of a parasail that the lift and drag of the parasail 244 can be varied by pulling or releasing symmetrically the control lines for the steerable parasail which results in symmetrically opening or closing the parasail control vents which is known in

the art. Alternatively, a separate vent in the parasail could be opened to lower its drag characteristics using a similar system to that used for the steering vents or similar to that shown in~~the left sketch of~~ **FIG. 25A** to close down the mouth of the parasail. Still another alternative is shown in ~~the right sketch of **FIG. 25**~~ **FIG. 25C.** In this configuration remote control unit 230 pulls on line 248 which passes through pulleys 250 and 252 at the bottom and top of the parasail canopy rim. By pulling in line 248 remote control unit 230 can pull the top and bottom of the canopy rim together in the middle and partially close down the parasail mouth and reduce the parasail drag.

D5 cont.

Another approach to keeping a large towed deployable lifting system up all the time to avoid frequent inflation and deflation and not restrict the direction and speed of the ship is to use a parafoil system ~~260 as shown in the bottom of **FIG. 25. The parafoil is**~~ steered by a remote control unit ~~266~~ which pulls control lines which is known in the art. In low or zero relative wind conditions the system would be unable to launch or recover a UAV but an electric motor ~~262~~ driving a propeller ~~264~~ could be powered through the tow line 4 to propel the parafoil to fly back and forth or in circles just fast enough to keep the system in the air.

(6) Separate page, after the last page of claims, add the following page:

Abstract

D6

An improved method of launching and retrieving a UAV (Unmanned Aerial Vehicle) (10) is disclosed. The preferred method of launch involves carrying the UAV (10) up to altitude using a parasail (8) similar to that used to carry tourists aloft. The UAV is dropped and picks up enough airspeed in the dive to perform a

pull-up into level controlled flight. The preferred method of recovery is for the UAV to fly into and latch onto the parasail tow line (4) or cables hanging off the tow line and then be winched back down to the boat (2).

D6 cancl.